



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/717,128	11/19/2003	James Mac Freitag	HIT1P027/HSJ9-2003-0150US	7028
50535	7590	10/20/2005	EXAMINER	
ZILKA-KOTAB, PC P.O. BOX 721120 SAN JOSE, CA 95172-1120			CHEN, BRET P	
			ART UNIT	PAPER NUMBER
			1762	
DATE MAILED: 10/20/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/717,128

Applicant(s)

FREITAG ET AL.

Examiner

B. Chen

Art Unit

1762

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 August 2005.
2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
4a) Of the above claim(s) 13-15, 17 and 18 is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1-12 and 16 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claims 1-18 are pending in this application. Amended claims 3-10 are noted.

The amendment dated 8/2/05 has been entered and carefully considered. In view of the arguments, the examiner has withdrawn the previous art rejection in favor of the one below.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-12, 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pinarbasi (6,208,492) alone or when taken in view of either Pinarbasi (6,317,299) or Huai et al. (6,381,105). Pinarbasi '492 discloses a method of forming a magnetic head having a PtMn layer wherein the method comprises forming an AFM layer 214, forming an AP layer structure 218/222/220 above the AFM layer 214, and forming a free layer 202 above the AP pinned layer structure (Figure 13). The AFM layer includes IrMn and PtMn (col.3 lines 56-60) and the various layers are formed using ion beam deposition (col.6 lines 20-25). However, the reference fails to specifically teach forming a PtMn layer using ion beam deposition.

It is noted above that the reference clearly teaches that various layers can be formed by ion beam deposition. One skilled in the art would realize that the reference suggests that the PtMn layer could be deposited by ion beam deposition. It would have been obvious to one skilled in the art to deposit the PtMn layer by ion beam deposition given the teaching of Pinarbasi '492 that various layers can be formed by ion beam deposition.

Art Unit: 1762

In addition, Pinarbasi '299 teaches that PtMn materials can be deposited by ion beam deposition in spin valve sensors (col.6 lines 30-40) and Huai teaches that the antiferromagnetic layer such as PtMn (col.8 lines 59-63) can be deposited by ion beam deposition (col.9 lines 8-10). It would have been obvious to utilize ion beam deposition to deposit the PtMn layer in the process of Pinarbasi '492 with the expectation of success because Pinarbasi '299 and Huai teach the conventionality of using ion beam deposition to form the PtMn layer.

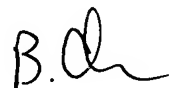
The limitations of claims 2-12 and 16 have been addressed above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to B. Chen whose telephone number is (571) 272-1417. The examiner can normally be reached on 7:30am - 4:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on (571) 272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Bc
10/17/05



BRET CHEN
PRIMARY EXAMINER